

UNITED STATES DEPARTMENT OF THE INTERIOR

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MINERALS MANAGEMENT SERVICE

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OCS RENEWABLE ENERGY AND ALTERNATIVE
USE PROGRAMMATIC EIS

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PUBLIC SCOPING MEETING

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THURSDAY, MAY 18, 2006

The meeting convened in Salons B and C of the Grand Ballroom of the Crowne Plaza Days Hotel, 220 Centreville Road, Herndon, Virginia, 20170, at 6:30 p.m., Karen Smith, Moderator, facilitating.

PANEL MEMBERS PRESENT:

WALTER CRUICKSHANK	Deputy Director, MMS
KAREN SMITH	Argonne National Laboratory
MAUREEN BORNHOLT	MMS
RENEE ORR	Chief, Leasing Division, MMS
MARK ROUSE	MMS
BOB THRESHER	National Renewable Energy Laboratory
AMY WHITE	MMS

PUBLIC COMMENTATORS:

SASHE ANNETE	U.S. Green Building Council, New Jersey Chapter
MICHAEL BAHLEDA	Bahleda Management and Consulting, LLC
CAROLYN ELEFANT	Ocean Renewable Energy Coalition
D. MICHAEL FRY	American Bird Conservancy
JOAN HARN	National Park Service
BOB LINK	Winergy Power, LLC
MICHAEL MERCURIO	Island Wind Inc.
DENNIS QUARANTA	Winergy Power, LLC
SANDRA YOUNG	Alliance to Protect Nantucket

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P R O C E E D I N G S

Time: 6:30 p.m.

MR. CRUICKSHANK: Well welcome everybody.

I'm going to stand down here, because I sit all day all day and like to be able to stand up and walk around a little bit and hopefully not get in your way of seeing the screen. My name is Walter Cruickshank.

I'm the Deputy Director of the Minerals Management Service and I welcome you here tonight for our first scoping meeting of ten around the country on our programmatic environmental impact statement for the Offshore Renewable Energy Program.

I want to take a couple meetings just to introduce a couple of people before we -[] we get into the presentations. Up here at the head table all the way on the left we have Bob Thresher, who I'll be introducing again shortly.

He's with the National Renewable Energy Laboratory. I want to introduce Maureen Bornholt. She's the team leader at Minerals Management Service for putting together our new program for renewable energy offshore. Two members of our team are up here, Amy Wies and Mark Rouse and I want to point out a couple of folks from Argonne National Labs as well. Argonne is going to be helping us get this

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1 environmental impact statement together. We have John
2 Gasper, who is the project manager and Karen Smith who
3 is going to be facilitating the meeting tonight.

4 What I would like to do to kick off -
5 Karen if you would move the slide, is just sort of
6 give you a little background about who we are at MMS
7 and what we're trying to do with this meeting and the
8 ones that will follow. For those of you not familiar
9 with Minerals Management Service we're part of the US
10 Department of the Interior and we manage the Energy
11 and Mineral Resources of the outer continental shelf
12 and we collect revenues from all energy and mineral
13 leases on federal lands on shore and offshore.

14 We're responsible for about 1.76 billion
15 acres of the OCS and that's another term that probably
16 needs some definition for some of you. The outer
17 continental shelf is that part of the ocean that is
18 under federal jurisdiction. So when you're - you're
19 walking out from the coastline the first three miles,
20 generally a little farther in some places is state
21 waters and we have no jurisdiction there, but once you
22 get beyond state waters then you're -- you're dealing
23 with the federal outer continental shelf and that's
24 where our - our jurisdiction kicks in. We are
25 responsible in our oil and gas program for overseeing

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1 activities that produce about 30% of the oil and 21%
2 of the natural gas produced in this country,
3 overseeing about 4,000 facilities fixed to the seabed
4 as well as 33,000 miles of pipelines.

5 We collect about \$10 billion last year
6 from all the various mineral leases. Most of it goes
7 to the federal treasury, but some goes directly to
8 states, American Indian tribes and individuals and to
9 special purpose funds like the Land and Water
10 Conservation Fund and National Historic Preservation
11 Fund.

12 What we're looking at today and this is []-
13 is a map of the outer continental shelf and some of
14 our planning areas. These [] these are the areas of
15 our jurisdiction and what we're talking about today is
16 this new program that we've just received to []- to
17 oversee renewable energy and some alternative uses of
18 the outer continental shelf. This comes out of the
19 Energy Policy Act of 2005, which specifically gave
20 Department of the Interior the authority over these
21 sorts of activities.

22 The Energy Policy Act specifically asks
23 the Department of Interior to put together a
24 comprehensive program to oversee renewable energy on
25 the outer continental shelf and to oversee certain

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1 other types of energy and marine related projects
2 dealing with converting existing oil and gas platforms
3 to other uses and I'll talk more about that shortly.
4 Department of Interior further than designated that
5 authority down to Minerals Management Service and
6 asked that we put together this new program.

7 It's a program that under that law
8 requires us to do quite a number of things. Set up a
9 comprehensive regulatory program that -- that deals
10 with environmental protection, safety, consultation
11 with states and other stakeholders, being cognizant of
12 other uses of the seabed and []- and basically watching
13 out for all those sorts of interests that you would -[]
14 you would want a federal land management agency to
15 watch out for and making decisions about how to manage
16 the seabed.

17 It requires that we issue some sort of -[]
18 of rights for folks who want to build these sorts of
19 projects. Normally through a competitive process and
20 requires also that we -- we put in some sort of
21 structured or assured fair return to the public
22 through some sort of fee or []- or royalty type of
23 payment.

24 There are certain things that we do not
25 have the authority over. One I already mentioned, we

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1 have no authority in state waters. The Energy Policy
2 Act language also does -[] leaves out other areas from
3 -[] from being under this jurisdiction, including
4 national marine sanctuaries, national parks, national
5 wildlife refuges along the ocean or []- or any national
6 monument. So there are certain areas that have
7 already been set aside from these sorts of activities
8 where we would not apply. This authority also does not
9 apply to ocean thermal energy.

10 There is a pre-existing piece of
11 legislation called the Ocean Thermal Energy Conversion
12 Act that many years ago gave that authority to the
13 National Oceanic and Atmospheric Administration, where
14 that program resides.

15 Well what we're going to be []- be doing
16 over []- over the coming months is -[] is to try and set
17 up our new program. As I mentioned we have to issue
18 regulations. We have to set up a []- a program for
19 sharing revenues with the states. We need to set up
20 our consultation process. We really need to build a
21 program from scratch on how we are going to manage
22 these sorts of activities, how we're going to manage
23 the process for decision making.

24 And what we're doing tonight is [] is part
25 of that process in that this is going to focus on the

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1 environmental compliance side of-- of these issues and
2 making sure we're considering the sorts of issues that
3 we ought to be considering from the environmental
4 analysis perspective in putting a program together.

5 The sorts of -- of activities we expect in
6 terms of renewable energy there's -- there's quite a
7 number of things. The ones people have heard the most
8 about are offshore wind parks at this point there a
9 couple of applications out there some that have -- have
10 gathered quite a bit of press. But people have come in
11 and talked to us about a number of other types of
12 projects; wave energy, current energy, projects to use
13 electricity generated offshore to produce hydrogen that
14 can then be used as a fuel for other purposes.

15 We also are -- are using this programmatic
16 EIS to look at the other part of the authority in the
17 Energy Policy Act, which is to allow for oil and gas
18 platforms where they exist to be converted to other
19 uses. And we've had a lot of folks come in and talk to
20 us about the sorts of activities that they might want
21 to convert those platforms to, things like basis for
22 aquiculture, things like converting them as to be
23 support basis for oil and gas activities in the deep
24 water Gulf of Mexico, using them for scientific
25 research purposes, for -- for telecommunications as --

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1 as a way to improve some of the communication aspects
2 for folks who are out at sea on boats or on other sorts
3 of facilities.

4 So there's been -[] been a lot of interest
5 in seeing if some of these facilities that are out
6 there can be used for other purposes. When we had the
7 authority over this our view is really that our
8 authority is over that platform and making sure that []-
9 that at the end of its use as an oil and gas platform
10 that it -[] that it's handled properly.

11 We don't necessarily view ourselves as
12 having the authority over some of these underlying
13 activities. We are not going to be regulating
14 aquiculture. For instance, if someone wants to use a
15 facility for a fish farm they will need the permits
16 from whatever agency has the authority over that type
17 of activity and we'd be focusing on -[] on just the
18 conversion of the platform for that use and not
19 permitting the underlying activity itself.

20 So -[] but []- but that's the sort of thing
21 that []- that we'll also be considering in this
22 programmatic EIS, that other part of the authority
23 that's not gathered quite so much attention as
24 renewable energy, but nevertheless something we want to
25 try and put in place. Well we have a -[] a few

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1 decisions we're dealing with in getting this program up
2 in place. We have a couple of specific applications
3 that were existing at the time we took over or the time
4 we received this authority from the Energy Policy Act.

5 So we are assuming oversight of those
6 particular projects, but what we're really focusing on
7 today is -[] is really our longer term issue of getting
8 this new program in place for these new uses that have
9 been authorized of the outer continental shelf.

10 In developing a framework we have several
11 things we're going to really be []- be trying to stick
12 to as principles in going forward. One is we really
13 want to create a robust stakeholder process. The
14 guidance we got in the act to create a consultation
15 process and to coordinate with other agencies is
16 something that we take very seriously.

17 We recognize these are new activities.
18 People have a lot of questions about them, people have
19 a lot of concerns about how the oceans are going to be
20 managed and []- and how these activities will -[] will
21 effect the sorts of things they -- they do now out in
22 the oceans and []- and we want to really set up a
23 process that []- that allows for meaningful input from
24 all stakeholders so they can feel at the end of the day
25 they have been heard and regardless of what decisions

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1 are made they can feel like it was a process that
2 allowed them to be heard and a process they would want
3 to participate again in -[] in the future.

4 We're also going to focus on our role as a
5 regulator. At the end of the day it is not our job to
6 say that any particular project must be built. Our job
7 is to review what is proposed and see if it makes
8 sense. Is it a project that []- that can meet whatever
9 criteria are established for environmental protection
10 and safe operations.

11 We are in essence the regulator and -[]
12 and we are trying to set up a regulatory program that
13 will set the sorts of criteria so people will know what
14 it is that's expected of them, but will also give some
15 pretty clear guidance to folks as to what sorts of
16 activities are []- are allowed in certain areas and what
17 sort of constraints they're going to be operating
18 under.

19 Some of our -- our other main goals, on a
20 big picture as a country the President has spoken to
21 this as has the Secretary, the past Secretary of the
22 Interior, renewable energy is an important part of our
23 future and []- and we feel that offshore renewable
24 energy will be an important part of the renewable
25 energy mix going forward.

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1 We believe that - that our task is to try
2 and put the programmatic rules in place that will
3 foster development of an offshore renewable energy
4 industry that will encourage the development of new
5 technologies so that this can become an important part
6 of the country's energy portfolio.

7 And in so doing we're going to be watching
8 out for the various interests that we ought to be
9 watching out for as a land manager to make sure the
10 environment is protected, to make sure that other uses
11 of the sea bed are - are not constrained by these
12 sorts of projects, to make sure that - that in essence
13 that as folks want to go out and use the oceans for -
14 for a variety of different uses that all of those sorts
15 of things are considered in the decision making
16 process.

17 We also want to make sure we - we try and
18 set up a regulatory process that works for folks, that
19 provides folks who are interested in applying to do
20 something some certainty as to what the process is
21 going to be like, some transparency as to - to what
22 the process is and how they can move through it and
23 and provide some certainty at the end of the day that
24 there's a process that is going to work efficiently
25 that will get efficiently two decisions and - and

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1 really sort of -[] of fix the issue that folks have had
2 with ocean activity over the last several years, where
3 it hasn't always been clear who you need to talk to and
4 what you need to do to get your project approved.

5 We're going to try and set up a program to
6 resolve those sorts of issues so it is clear what you
7 have to do and how you have to do it so we can move
8 efficiently towards decisions. We're really doing two
9 things in []- in trying to get this program in place.
10 One is a []- is a rule making that will set out our
11 regulatory principles and our regulatory guidance for
12 new applications.

13 We published an advance notice of proposed
14 rule making late last year where we -[] we really raised
15 several dozen issues that we were seeking comment on
16 and we grouped them into -[] into five categories.

17 One dealt with access to the seabed for
18 these sorts of projects, how -[] how would one gain
19 access what sorts of rights would be conveyed and []-
20 and what would be the mechanism for conveying them,
21 coordination and consultation with []- with states,
22 other agencies and stakeholders, what kind of
23 environmental management system would we put in place,
24 what sort of information would have to be developed up
25 front and how would that be used for -- for compliance

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1 and monitoring, how we would oversee the operational
2 activities from - from a engineering perspective in
3 essence, how - what's - what's - what sorts of
4 engineering standards should be in place and - and how
5 would we oversee the day to day operations and then the
6 sorts of payment scheme that would be set up to ensure
7 a fair return to the public.

8 We - we group our - our dozens of issues
9 around those. We received quite a lot of comment,
10 about 150 comments or so. Some of them quite
11 substantial in terms of both size and the issues they
12 raised and we are working through that input as we try
13 to get a proposed rule together for folks to actually
14 have something more tangible - a more tangible
15 proposal to comment on as we move forward.

16 The - the other part is - of what we're
17 doing is - is what we're here today for, which is the
18 programmatic environmental impact statement and - and
19 I want to first just sort of make the point that what
20 we are not talking about today is specific projects.
21 We do have two specific projects that are in the works,
22 the Cape Wind project offshore Massachusetts and the
23 Long Island Offshore Wind Park, offshore Long Island.
24 Those will have their separate processes as - as those
25 are things that -- that are already underway. They

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1 will have their own scoping processes, their own
2 National Environmental Policy Act work done for them in
3 parallel with what we're doing here.

4 What we're doing here really is -[] is
5 trying to deal at a national level. And now I'm going
6 to reach for some notes, because I am not a NEPA expert
7 and I don't want to get any of this wrong, but really
8 what we're []- we're aiming for at this point is to try
9 and set up the [] the NEPA work that should go along
10 with the national program, that there are going to be
11 common issues across any sort of project that happens
12 offshore, there are going to be common concerns and
13 what we're trying to deal with in this programmatic EIS
14 are those national issues, those common issues, those
15 generic issues that will really need to be dealt with
16 regardless of where a project is located.

17 We're not getting into site specific
18 issues here, but the -[] but the sorts of issues that
19 will come up no matter where you're located. What sort
20 of mitigation activities should we be considering, what
21 are best practice [] practices for these sorts of
22 projects elsewhere. We're really looking for [] for
23 input and analysis of these []- these broader issues to
24 form a firm foundation for the rules we put in place
25 and for the site specific applications that will

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1 follow.

2 National Environmental Policy Act
3 basically requires for any major federal decision that
4 there be this sort of environmental review. The
5 decision we're looking at here is not over whether to
6 build any particular project, but a decision on what
7 are rules are going to look like and - and so this
8 programmatic EIS is really aimed at supporting the rule
9 making process that I already mentioned.

10 What we will be doing is - is seeking
11 input and this is our first meeting - our first
12 scoping meeting of - of ten we're going to have across
13 the nation to try and start gathering that input from
14 folks who either have expertise or an interest or some
15 thoughts that they want to share and - and we will use
16 those to put together a - a draft EIS, which will then
17 itself go out for public comment and - and further
18 public hearing as we put the program together.

19 I think I've - I've largely covered this
20 already, but again what we're looking at is an analysis
21 of all the various environmental and socioeconomic
22 issues that will accompany these types of projects,
23 that will identify the sorts of impacts we should be
24 analyzing, the sorts of mitigation techniques we ought
25 to be considering and really, again, form a foundation

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1 for understanding the -- the broad issues that will
2 form the basis for building on for any specific
3 application that we will have in the future.

4 The scoping meetings, of which this is the
5 first, is -- is really as I mentioned is to start
6 getting the input from folks, to -- to give people an
7 opportunity to -- to stand up in front of us face to
8 face and tell us what they think are the issues that we
9 ought to be considering and -- and give us their
10 thoughts on -- on what's important as we go forward in
11 this process.

12 Now obviously not everybody's going to
13 ever be able to make it to a scoping meeting, because
14 we're not having them every possible place. This is
15 not going to be the only way you can get your thoughts
16 in -- we're -- we'll be listening and transcribing your
17 comments tonight, but -- but folks can also submit
18 written comments or -- or comments to a website.

19 So we'll have plenty of opportunity to
20 hear whatever it is that you would like to say. The
21 sorts of input we're looking for, again, are on these
22 generic, broader issues. Site specific issues are not
23 things we are particularly interested in at the moment,
24 because we are not looking in this cross at any
25 specific sites.

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1 We want to know what concerns you have
2 about these technologies in general, what sorts of
3 issues we ought to be examining, what the technologies
4 are that are out there that are important for us to
5 know about, what mitigation techniques and practices
6 have been used elsewhere in the world or in this
7 country that we ought to be looking at and making sure
8 that we understand as we go forward in making our own
9 decisions.

10 Our basic schedule is -- is to do these
11 scoping meetings over -- over the next couple of months
12 and -- and work towards having a draft environmental
13 impact statement available early next year.

14 Again we're going to take what we hear at
15 these meetings, as well as other information that we're
16 able to gather through our -- through our own research
17 and our contacts with similar type programs in other
18 countries, to try and build a draft EIS that looks at
19 these issues. We'll put that out there for comment,
20 have hearings on that draft EIS and -- and then work
21 towards a -- a final environmental impact statement
22 later next year that will come out in conjunction with
23 our final rule making and form the basis for the
24 national program.

25 If you want to comment, again, you can do

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1 this at this meeting and -- and I do need to give a
2 little reminder here. Folks who want to speak this
3 meeting are supposed to have signed in and so if you
4 haven't done that I think there's a sign in table right
5 outside and -- and you can sign in to do that if you'd
6 rather not speak, but have something you'd like to get
7 to us we have comment cards here and you can visit our
8 website at Argonne National Lab that related to the CIS
9 or send in written comments.

10 It doesn't matter what technique you use
11 to give us comments they all have the same weight they
12 all get the same consideration, whether it's spoken
13 verbally or sent in. So, again, we encourage everybody
14 to give us their thoughts through whatever means
15 they're comfortable with.

16 At this point what I'd like to do before
17 we open it up to the floor is open it up for another
18 presentation to just sort of give you a little bit of
19 background on wind technology and the sorts of things
20 that we're going to be dealing with and I'd like to
21 introduce Bob Thresher. Bob Thresher is the Director
22 of Department of Energy's National Wind Technology
23 Center at the National Renewable Laboratory in Golden
24 Colorado. He's been working in wind energy for over 30
25 years, since the first oil embargo and working at a

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1 center that performs a lot of research and development
2 for the Department of Energy's wind energy program.

3 And I've seen Bob speak before and other
4 folks from this program and they have a great deal of
5 expertise on these technologies and hopefully he'll
6 give you some good information to consider as we go
7 forward.

8 MR. THRESHER: Thank you Walter. I'll move
9 back here and walk around too. I sort of feel like
10 with the room half full I feel like I'm sort of
11 separated. So I'll probably go back in the back and
12 stand behind you, just to -[] just to make you turn your
13 head. This should be entertaining, I hope. It should
14 be somewhat informative and it should be fun, so just
15 relax and enjoy the ride.

16 I'll go through it pretty quickly, but
17 I'm going to talk about []- mostly about ocean energy
18 technology and offshore wind technology. And if you go
19 to the next slide, I'm also going to kind of hit some
20 hybrid technologies and some advanced application. And
21 you probably can't read this so I'll just give you the
22 bottom line, I presume we're going to put the view
23 graphs out someplace on the website.

24 So you'll be able to look at those if you
25 []- if you want to study them. But if you look at -[]

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1 this is about resource potential in [] basically in
2 North America and it starts -[] the first line there is
3 about onshore wind and there's some different ways of
4 expressing the potential [] the extraction potential,
5 which is kind of like taking the windy land and adding
6 it up -[] all up and asking the question if you put
7 windmills everywhere how much would you -[] how much
8 would you have and it's so overwhelmingly large that
9 there's -[] there's really -[] we're really blessed with a
10 bountiful amount of wind energy.

11 It's onshore, it's offshore, it's at least
12 as large and then you get down to wave technologies and
13 that's somewhat less, but you go over to the last
14 column it's still enough, the wave energy technology []-
15 it would have the potential to supply a significant
16 chunk of -[] of our nation's electricity if you wanted
17 to do it that way.

18 Then you go to title and that drops quite
19 -[] quite a bit and that's only a few percent and then
20 ocean current is also a fairly small number. A lot of
21 this data about resource potential in the ocean is
22 really old information that has been gleamed from some
23 old reports. There hasn't been a good national
24 resource assessment, particularly for ocean energy,
25 ever to my knowledge.

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1 So these numbers are subject to very large
2 errors, but the point is there's lots of wind, there's
3 lots of tidal energy, and they're within our ability to
4 harvest those and I'll try and give you a little -- a
5 little confidence in that result. Next slide.

6 This is what's happened to wind energy.
7 The pink in the back is what's going on in Europe. The
8 brighter pink is 2005, which was last year and then
9 the -- the lighter colors just indicate projections for
10 the next three years. But you can get the -- the
11 growth rate in Europe and the pink in the back is
12 pretty large by comparison.

13 And -- and the blue is -- North America,
14 which includes Canada, but most of that's in the US and
15 the green is the rest of the world. And -- and you can
16 ask the question, okay, what's wrong with the US? Well
17 we didn't buy into accord -- to Kyoto accord and so the
18 European market is driven by the desire to reduce
19 carbon emissions, CO2 and -- and they really believe in
20 global warming and they're worried about it and they're
21 doing something about it.

22 So they've incentivized their renewables
23 and that's why you see the pink curves shooting to the
24 sky and the other stuff's kind of bouncing along. So
25 we do have some tax credits, but they're nothing like

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1 what's going on in Europe.

2 Next slide. Why go offshore? There's
3 obviously-- from the first slide there's lots of
4 potential on land, but why would you want to go
5 offshore with wind? Why offshore wind? The -- the
6 picture on the left, which you can kind of see is the
7 United States, you see those red spots? That's not the
8 measles. It's the population centers. It's where the
9 loads are and if you'll notice the load centers,
10 particularly in the east is right on the coast. If you
11 look at the map on the other side that's the wind
12 resource, well guess what? All the wind resources in
13 the middle, all the people live on the edge. So you
14 have to pipe or ship out those electrons from North
15 Dakota and that isn't easy. And there's some
16 transmission issues that I could go into ad nauseam,
17 but basically it cost money to get it from the center
18 of the country to the edges. So why not just build
19 offshore.

20 In addition the wind sites are better. The
21 downside is you've got to go offshore, you've got to
22 wade around in the water and somebody put some waves in
23 that water, which depending on your point of view might
24 be good and fun, but if you're building wind turbines
25 you'd rather have them □ rather have them on land with

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1 a nice steady foundation. So there are some
2 challenges, you have to work offshore, which many of
3 you know is not easy. But basically there's resource
4 off there and it's located close to the population
5 center and right now it's a little too expensive to go
6 offshore.

7 The costs are much higher, but they're not
8 out of sight, they're close to being competitive at
9 this point in time. A little bit of help from a tax
10 credit and you get, particularly in the northeast,
11 where power prices are high, you're getting -- you're
12 getting pretty close to a match. You can avoid the
13 carbon emissions. So there is a story there for going
14 offshore.

15 Next slide. Europe, as I mentioned, has
16 already gone offshore and there should be a number
17 there. There's about 800 megawatts as of December
18 offshore in Europe and the little red windmills that
19 are poking around are basically the offshore wind
20 farms, the big countries that are putting in most of
21 the offshore wind are Denmark and the UK. In fact the
22 UK has a national commitment and they're looking for,
23 it's a pretty small country, but they're looking for
24 something like 8,000 megawatts of wind offshore over
25 the next twenty years. So they've got quite a

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1 commitment to go offshore, as does Denmark.

2 The story with Denmark is they are getting
3 - right now they're getting 20% of their energy from
4 wind, in the US we're getting about a half a percent.
5 So that's the difference in the incentives that are -
6 that are - that play in Europe versus here. Germany's
7 quite a bit behind that, but has something like - I
8 think Germany and Spain are in a race for - it's
9 something like around 10 or 12% of their energy from
10 wind, fairly significant penetration.

11 Next slide. These are the projects in the
12 US. They're at - at this point in time no offshore
13 wind installed and there are some projects proposed.
14 The yellow ones are the projects that are sort of in
15 the lead and are - are basically mentioned in the - in
16 the legislation, the Energy Policy Act of 2005. So
17 those are the ones that are in yellow, but there's
18 several others proposed including down in the Gulf.

19 Next slide. This is what -- what a wind
20 turbine looks like. It's got a rooster on the front
21 that takes the very diffuse energy in the wind,
22 collects it, basically it - it's like a moving air foil
23 and the trick to a windmill is to collect energy. It's
24 like a solar collector. It's the collector area. The
25 bigger the collector area the more energy you get out.

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1 And that's the reason that turbines have been getting
2 bigger and bigger.

3 You want to maximize your roter swept
4 area to get as much collection at one point as you can
5 and that reduces your fixed costs, your tower, your
6 infrastructure in terms of electricity. So you want a
7 very large swept area to pay for everything else. But
8 basically because the energy is so diffuse you need a
9 large area as you sweep that roter around it moves
10 very slowly. You have to speed it up, so there's a
11 gear box and then at the back end of the drive train
12 there's a generator that turns the mechanical energy,
13 the rotational mechanical energy into electricity,
14 shoves it into a cable and delivers it to your house
15 through the transmission system. So it's really not
16 that much different than a steam turbine or gas
17 turbine. The main difference is the energy's very
18 diffuse. There's - there's small -- lower amounts of
19 energy in the flow than there is in - in the wind than
20 there is in like a gas turbine or a steam turbine where
21 you get to deal with high speed flows.

22 Next -- next slide. Here's kind of the
23 first thing you do if you're going to do a wind plant
24 someplace offshore you look at the wind. Is the wind
25 good enough to warrant a commercial installation. You

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1 need a pretty good wind. The higher your wind speed --
2 the energy in the wind -- the kinetic energy in the wind
3 that you're trying to harvest is basically a function
4 of the cube of the wind speed. So a 10% increase in
5 wind speed, you cube that and you get a bout a 30%
6 increase in energy.

7 So very small differences in winds speed
8 can make the difference between profit and loss. So
9 you want to do a survey and you want to know you've got
10 good a wind field. There's also some other things that
11 are done -- done for siting. In this case this shows a
12 picture of an avian radar, which is to -- to ask about
13 the bird activity that are flying through there. You
14 don't -- you don't want to cause anymore mortality with
15 birds than you have to.

16 So you'd like to avoid the birds, make
17 sure that you're site is not heavily used. And there's
18 also some -- some look at the sea life in that area to
19 make sure you're not going to interfere with that. So
20 that's kind of your -- your preliminary site
21 assessment. Are there any show stoppers, have you got
22 the wind, is this going to be a viable project from an
23 environmental point of view and from an economic point
24 of view.

25 Next slide. This is just a picture of the

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1 technology. That's a GE wind machine 3.6 megawatt
2 machine, it's an offshore machine, 104 meter roter.
3 If you click it again you should get a size comparison
4 with a wingspan on a 747 to get you sort of a feel for
5 how big this - this is. It's not -- not a trivial
6 engineering feat it's - it's pretty difficult actually
7 in terms of - of getting the stresses and strains and
8 the dynamic loads such that you have a cheap structure,
9 but one that - that can stand the environment.

10 Next slide. This is a picture of a wind
11 farm in - one of the big ones in Denmark. It's called
12 Horns Rev or Horns Rev and basically you can just see a
13 bunch of sticks out there on the horizon. That's a
14 great picture. On the left it gives you the - some
15 data about the turbines, they're - it's 160 megawatt
16 wind farm and there's 80 turbines. They're about 14 or
17 - 14 to 20 miles off - or sorry 14 to 20 kilometers
18 offshore.

19 It's in about 6 to 12 meters of water,
20 basically the technology stratus is right now these are
21 only feasible in shallow water, if you move into deep
22 water the costs grow to fast, we don't know how to do
23 it well enough and so we've got a technology barrier
24 that's a few years off in terms of going to - to deeper
25 water. But - so it's shallow water, the roter

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1 diameter on this system is 80 meters and they're []
2 they're a Danish turbine called a vestus V80. The wind
3 speed offshore is right around ten meters a second at
4 this location.

5 Next slide. Here's just a couple of
6 pictures. This is a little bit about how they put the
7 technology in. What they do is they go out and they []
8 they basically take a pipe - a big pipe about four
9 meters in diameter and drive it into the mud about 30
10 meters into the mud and then they put a transition
11 piece on top, sort of an adaptor and then they set the
12 turbine on top of that and some times they work out
13 there - that barge is out there probably putting in
14 some rip rap on the bottom to keep from eroding around
15 the - the turbine. Some of these are in shallow water
16 where there's high currents, depends on the current
17 situation how much you need to worry about that.

18 Next slide. There's lots of different
19 kinds of foundations. The two on the left are pretty
20 much in common use today in Europe. Monopole
21 foundations, which is the pipe you pound into the
22 ground. The gravity foundation is a - is a big chunk
23 of concrete that basically you take out into a barge
24 and you drop it into the water and then you put the
25 turbine on top of it, pretty much for very shallow

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1 water, like □ like five meters and those are proven
2 designs.

3 The ones they are working on right now,
4 for the future, is a - is a tripod structure, which is
5 a little stiffer and they're hoping this will work
6 economically for deeper water. Maybe 20 to 40 meters
7 is the hope.

8 Next slide. I think that's just a picture
9 □ those are the - the gravity based foundations being
10 put in place. This was at a wind farm near Denmark.
11 The Europeans have been working on offshore wind for
12 about ten years with demo projects of a few turbines,
13 trying the technology, putting some instrumentation,
14 looking at the O&M costs and making sure the technology
15 works, but that's one of the foundations they tried.
16 You can see how big it is, kind of relative in the
17 picture, that □ that's a big concrete sort of a pod
18 that you set the turbines on.

19 Next slide. This just talks about the
20 electric grid and the cable and that's a cable laying
21 vessel. It's a little hard to see back this far, but
22 if you have to put a cable to shore you need an
23 extension cord to go out to your wind farm to get the
24 power in and there's □ int this picture there's a big
25 drum on the deck, the cable goes up here and it goes

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1 out the back of the ship and the ship has actually got
2 tow lines that anchors, that pulls itself along it's
3 got a plow that digs a trench, they lay the cable in,
4 they've got another plow that comes along and basically
5 tries to cover it up again. So that's the way [] they -
6 they pretty simply lay - lay the cable in.

7 Next slide. Offshore wind turbine access.
8 One of the lessons learned from Europe in terms of the
9 technology is it's not like a land based wind farm.
10 You can't jump in the pickup truck, go out over the
11 gravel road, climb the tower, and turn the switch on or
12 off, you've got to jump in a boat and you've got to
13 ride out there and guess what? When the windiest
14 periods the lights come up and that gives you a little
15 bit of an access problem. So there's been all kinds []
16 you can see the ship on the right - right there in that
17 picture. That guy's trying to make it out to a - to a
18 wind farm. I'm not sure who took the picture, but it's
19 a work boat and you can see that - that's a pretty
20 tough ride and then when you get there you have to get
21 onto the platform. They've even used helicopters.
22 They take the maintenance guys out when they need to
23 and they

24 They take the maintenance guys out when
25 they need to and they drop them in on top of within a

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1 cell and they go in that way, but that's pretty
2 expensive work. You can do that, but that's very
3 expensive. So there's been lots of people working on
4 access methods and that's one of the challenges.

5 Next slide. The Future. This [] this is
6 future concepts, might take 20 years to commercialize,
7 but we're thinking about deeper water. The US is
8 blessed with lots of offshore wind, but it's in 100
9 meter water or 50 meter water or 900 meter water.
10 There's lots of great wind on the West Coast, but the
11 coast drops off very steeply. So if you're going to
12 use a lot of that in the West Coast you'd need some
13 kind of a floating structure. And so we're looking a
14 little bit about the feasibility of having floating
15 structures with [] with tethers to the bottom. We're
16 working with some of the oil companies, particularly
17 with tension leg type platforms which are shown on the
18 [] the [] on the right here and on the left is [] is the
19 spar buoys sort of concept. Let's move around a little
20 more. These are future concepts; they're just under
21 investigation. Nobody's built one; nobody's floated
22 one. So that's probably 20 years out.

23 Next slide. I want to talk about ocean
24 wave and current devices. This technology is at least
25 10 years behind the wind technology maybe more.

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1 There's a lot of prototypes around, a lot of people
2 with ideas, but there's not much experience and there's
3 no commercial vehicles right now. The Europeans have
4 very active programs, particularly the UK, which has an
5 abundance of wave energy and they're heavily funding R
6 & D to try and bring some of this basically no carbon
7 electricity to the [] to the coast. So one of the
8 things that's needed for this technology is test sites.

9 It's really difficult if you have to go through a full
10 permitting process to find a test site to test one or
11 two devices.

12 So the testing is a big issue. People
13 would love to have a place that was pre-permitted just
14 to be able to tow their vehicle. The Euro -- it's
15 exactly what the Europeans have done. I'll show you a
16 picture of it later.

17 Go on, next slide. Here's what they call
18 point absorbers. These are like buoys with devices
19 inside of them that when the waves come and they bob up
20 and down they extract energy and there's various ways
21 of collecting it and bringing to shore, but generally
22 it's a cable. There's [] there's basically the idea is
23 this collects from a single point [] a point absorber so
24 as the wave comes over it [] there's some kind of a
25 reciprocating device or something that spins inside the

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1 buoy that generates the energy.

2 Next slide. This is the Palamis, which is
3 a point absorber. It's under tow in this, but this []
4 you can see it's like a big sea snake and there's
5 segments and between each one of the segments as it
6 moves and [] and actuates between the segments there's
7 some hydraulic rams that connect the segments together
8 and as it bends like that it [] it pumps a hydraulic
9 flow into a tank and then that [] they'll use a
10 hydraulic fluid to extract the kinetic energy from the
11 actuation between the segments. It's [] it's currently
12 under tests at the European test site.

13 Next slide. There's also some ocean
14 current and title current devices and they basically in
15 my vernacular would be underwater windmills. There's a
16 tremendous in going into the water with your [] with
17 your rotating device and using the current as you get a
18 density boost of a thousand. Roughly water is a
19 thousand times more dense. So even at very low current
20 velocities, two three meters a second; you can get a
21 lot of kinetic energy, because the density in the fluid
22 is much higher. So kinetic energy goes up. So these
23 are devices that are basically some kind of a propeller
24 device, horizontal axis, vertical axis, some of them
25 have shrouds to try and concentrate the energy. But

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1 some of them look just like windmills. This one down
2 here or the one up there in the top left looks pretty
3 much like a windmill and so does this one. This is a
4 experimental unit that's been put out in the UK.

5 Next slide. Test Facilities. I've
6 already mentioned that briefly, but on the left is a
7 kind of a rough coast out in the Orkney Islands off
8 Scotland and basically they have four permanent test
9 berths and you can pull your ocean energy device up,
10 tether it, there's a cable □ undersea cable that you
11 can hook up to.

12 So you bring your device up, plug in, and
13 you can run your test to get your performance. The □
14 the wave devices are much more difficult to quantify
15 the output, because you have varying wave heights,
16 which varies the kinetic energy and you also have a
17 varying frequency in the waves, which also changes the
18 energy. So it's a little more complicated than a wind
19 device where there's just one perimeter, which is wind
20 speed.

21 The picture on the other side is basically
22 showing working in the ocean you've got to worry about
23 the waves, you have to worry about currents, you have
24 to worry about bottom conditions and scouring, you have
25 to worry about the wind that's above whether it's a

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1 windmill or even a wave device you still have to take
2 the wind loads, and so it's quite a dynamics problem.
3 It's very dynamic environment from both the wind point
4 of view and the wave point of view.

5 Next slide. So there's also been a lot of
6 people proposing to make hydrogen offshore and then
7 ship the hydrogens onshore. This is for the [] the
8 hydrogen economy of the future. And this is very long
9 range. That's an optimistic 20 years. Hydrogen's
10 pretty far off, but there's a lot of [] it's been
11 thought about [] the [] the funny cartoon down in the
12 corner was thought about in the '70s for [] for offshore
13 windmills that floated out there and [] and made
14 hydrogen. But up in the other picture is a large scale
15 elec [] electr [] electrolysis unit that [] that basically
16 a multi-cell unit, it looks like some kind of a
17 cylinder, but those are basically stacked together,
18 pancaked cells to produce hydrogen. So you can do
19 large-scale hydrogen, but it's too expensive right now.

20 Next slide. You can also -- if you're
21 going to go out and put a wind device out there you can
22 also put with it [] you can put a wave-making machine.
23 You've got to be out there, you've got to have the
24 extension cord to shore, you've got to build the instr
25 [] you've got to build the extension cord to get out

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1 there. So if you get [] you can harvest the wave energy
2 and the wind energy. Some folks think that [] that you
3 can have a more profitable situation. This is a little
4 bit of futuristic thinking, but if you look at the
5 picture on this side over here, what this is is a
6 windmill up here and then there's two propellers under
7 water to get the kinetic energy out of the water under
8 water.

9 So that's a type of hybrid device and the
10 one on the right, the floating one is [] looks like an
11 overtopping device where the waves run up a ramp and
12 then go through a hydraulic turbine and then the
13 windmill's above it. So because you've out there
14 you've got to put the foundation in, you need to do all
15 of those things, so you can do two things at once,
16 should reduce the cost. That's [] that's the thinking
17 anyway.

18 Next slide. Environmental Analysis. This
19 is kind of the lessons learned from Europe. In Denmark
20 they've done at the wind sites, basically five years of
21 BACI. If you're not familiar with a BACI it's [] it's a
22 type of experiment where you go in and you look around
23 and do the study before and then you put in the [] the []
24 the plant or the device or changes the situation you do
25 it all over again to see what the difference is and you

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1 also have a reference site, because sometimes the world
2 around you changes and so you have to be a little
3 careful about sorting out your impact, because we've
4 done it for wind sites for a number of years and
5 sometimes there's a change in a bird population or
6 change in a [] in the way the species moves through an
7 area and they disappear from area A, they go five miles
8 down the [] down the road and they're down there.

9 So you got to be a little careful, so you
10 need a control site to kind of see if there's the same
11 things going on at your control site. So you have that
12 that you do both before and after. There's something []
13 a couple a hundred studies in Europe [] and basically if
14 you look through what they've done they claim there's
15 no show stoppers in any of this in terms of the
16 environmental. There are some temporary impacts, but
17 there don't seem to be any lasting impacts, mostly
18 associated with construction things. Trying to do both
19 studies offshore is not cheap as you might guess and
20 there's [] there's a search for doing things remotely or
21 by some kind of instrumentation and there's look for []
22 a need for innovative mitigation strategies,
23 particularly for temporary construction impacts.

24 All of these things have [] a [] you have to
25 worry about the scientific uncertainties and multiple

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1 uses and ecological risks. There's lots of ecological
2 risks and you -- you kind of have to look at it in a
3 relativistic sense. I -- I like to tell people that in
4 our energy future there is not a do nothing solution.

5 You're going to get wind, you're going to
6 get wave, if you don't get those you'll get more coal
7 and nukes and -- and you have absolutely no choice.
8 That has to happen, because the population's changing,
9 energy use is changing, we've got some developing
10 countries that are coming on with tremendous
11 electricity needs. So there is not a do nothing
12 option. So you've got to balance not just is there an
13 impact, but how is this impact versus what else you
14 might have to do to get that same energy.

15 Next -- next slide. Here's some of the
16 studies that have been done, visualization, hydraulic
17 studies, benthic, flora fauna, fish, big interest in
18 electromagnetic fields what their effect might be on
19 fish, because of the cable to shore, porpoises, seals,
20 birds, and then the benthic community or the hard
21 bottom communities. Huh, that must be different. I'm
22 not very good at hard bottom communities. Sounds --
23 sounds like some kind of slang to me.

24 What were you thinking Bonnie? Come on.
25 Here's some references for the studies that have been

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1 done in Europe. I'm not going to spend a lot of time
2 on that if this is going up on the web, but there's a
3 lot of websites with access to what has been done.

4 Next slide I think is just kind of the
5 bottom line. What's in the near term? Right now we
6 can do wind turbines in shallow water close to shore.
7 That's about it anything else is going to be just too
8 expensive and European studies don't show any real
9 lasting problems. We're looking at new technology, but
10 it's going to take a while and the ocean current
11 technology, wave and current technologies are really
12 just at the first prototype stages.

13 They're just under test so there'll be
14 some demo projects and then perhaps some commercial
15 projects after that. So that's probably five years
16 out, maybe ten. And then hydrogen that's over the
17 horizon for most of us. So I think that's probably the
18 end. Thank you.

19 MR. CRUICKSHANK: Thank you Bob. We're now
20 going to turn this over []

21 MS. SMITH: Oh could you turn on the [] turn
22 it on?

23 MR. CRUICKSHANK: I thought I did.

24 MS. SMITH: Oh. Is it on?

25 MR. CRUICKSHANK: Is it on now? Okay.

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1 Yes. All right. Thank you Bob. As I mentioned before
2 we have Argonne National Laboratories helping us put
3 together this programmatic environmental impact
4 statement, they have a wealth of experience in [] in
5 doing environmental analysis and on [] on this
6 particular issue they did the programmatic
7 environmental statement for the wind program on onshore
8 federal lands for the Bureau of Land Management. I'm
9 going to be handing the meeting over now to Karen
10 Smith, she's a [] head of Argonne's Environmental
11 Sciences Division Office in Denver, Colorado and the
12 strategic area manager for energy development at
13 Argonne.

14 MS. SMITH: Thank you Walter. Good
15 evening. A couple of things, I'm going to be the
16 facilitator for the remainder of the meeting while we
17 get comments from the public, before we get into that
18 stage though we would like to offer an opportunity to
19 ask some questions about the information that's been
20 presented on these slides. And I want to caveat a
21 couple of things, first of all we have a [] a reporter
22 here who's making a transcript of the meetings and
23 she's hooked up with a direct feed to the audio system.

24 So in order for her to capture the
25 discussion we need to have people speaking into

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1 microphones so anytime you want to make a statement or
2 ask a question we're going to be coming around with a
3 microphone and [] and we're going to ask you to please
4 use the microphone, I know not everybody likes to, but
5 we'd like to do that so we can get a complete
6 transcript of the meetings and that includes your
7 comments that are made publicly. And also we're going
8 to take questions and answers, just a courtesy in case
9 there's some things you don't understand from the
10 presentations, there maybe some questions you have that
11 MMS doesn't currently have the answers for. We're
12 pretty early in this process.

13 We're just starting this evaluation. So
14 be patient, because there may not be answers to all the
15 questions you have. But if anybody has questions at
16 this time about the material that was presented we'd
17 like to offer you an opportunity. Okay. Well there'll
18 be potentially [] oh we have a question.

19 MR. BAHLEDA: Hi. I'm Mike Bahleda. I'm
20 with Bahleda Management. Bob Thresher, most of the
21 studies you cited from the European Markets were for
22 wind projects offshore as far as the environmental
23 studies and the the BACI studies?

24 MR. THRESHER: Yes. That's correct.

25 MR. BAHLEDA: Were there [] were there any

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1 studies done on ocean or [] or wave technologies, at
2 least preliminary testing perhaps in Norway or
3 something?

4 MR. THRESHER: There's [] there's some underway now, but
5 I don't know of any that [] I have not seen any results
6 from any of those studies, but I know that they've
7 initiated some. But I [] I don't think there's any
8 results.

9 MS. ELEFANT: My name is -- oh I'm sorry []
10 that's great. My name is Carolyn Elefant. I am an
11 attorney in Washington D.C. and the CEO of the Ocean
12 Renewable Energy Coalition. I had a question for MMS
13 about how you're going to deal with the deadline that
14 was provided in the statute, by which you're required
15 to implement these regulations, is there some sort of
16 legislative extension or is there anything else that
17 will [] that provides for this process to move forward?

18 MR. CRUICKSHANK: The [] forget exactly
19 what the statutory deadline was off the top of my head,
20 but it was a fairly short time, 270 days, I think
21 perhaps to get to the final regulations, starting from
22 [] from last August.

23 Our feeling is that this is a major new
24 program that requires a lot of input from [] from a lot
25 of folks and we did not want to rush the process by []

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1 by getting a program in place where we didn't have
2 adequate time to consider stakeholder input and to
3 think through the many issues that [] that are being
4 raised. The statutory deadline was [] was one that was
5 in the statute, but there are - are really no direct
6 implications from missing it in [] in the sense that if
7 we've missed a deadline we've missed it.

8 It doesn't create any particular legal
9 obstacles or opportunities for anybody because of that
10 and our [] our concern is making sure we [] we get this
11 program set up the right way and not necessarily the
12 quickest way.

13 MS. SMITH: Any other questions? A
14 couple.

15 MS. HARN: My name is Joan Harn and Mr. []
16 Dr. Thresher if you [] you'd reported on the [] the energy
17 resource summary and noted that it was old data. Is
18 there any new evaluation that's underway given the new
19 technologies that are being developed.

20 MR. THRESHER: Well the wind [] the wind
21 resource assessment is being re-evaluated for offshore
22 wind. I am not aware of any work in the wave area.
23 There is a requirement in the Energy Policy Act to do a
24 resource assessment, however, there was no funding
25 appropriated to do such. So I think the wind will

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1 probably go forward and the others will probably
2 languish until there is some funding provided to move
3 forward.

4 MR. MECURIO: Dr. Thresher, is it is it
5 true that in Europe

6 MS. SMITH: Could you could you speak
7 your name, please?

8 MR. MERCUIRO: Mike Mecurio from New
9 Jersey. Is it true that the reports so far from Europe
10 and the offshore along the East Coast could provide a
11 40% capacity on the wind resource for offshore wind?

12 MR. THRESHER: Yes there that's that's
13 about right it depends it depends on the individual
14 site, but a capacity factor for offshore wind of 40%
15 would not be would not be too high, you may get
16 better than that. We've gotten 40% capacity factors on
17 land. It's all got to do with the wind speed, what the
18 capacity factor is. So 40% is not unusual and and
19 certainly the Europeans have gotten some like that.

20 MS. SMITH: Any other questions at this
21 time? Okay. We're going to transition now to the phase
22 of the meeting where you get to stand up and make
23 comments, provide remarks and before we do that I'm
24 going to give you a little bit of information about the
25 public involvement activities that are going to be

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1 associated with this EIS. As Walter was stating we're
2 at the scoping phase and this is really the first
3 opportunity in the life of an EIS for the public to be
4 involved. It's not the last opportunity.

5 And just to be clear MMS is seeking your
6 input on the issues and concerns you have about
7 offshore renewable energy development and alternate use
8 of existing platforms so that they can help define the
9 scope of the analysis for the EIS.

10 So what are the things that you're
11 concerned about. This is the time for you to identify
12 those to MMS, as well as to identify the possible
13 alternatives that you want MMS to consider in its
14 evaluation; the various scenarios that you want
15 examined in the programmatic EIS. That's what scoping
16 is about. That's not the last opportunity you'll have
17 to be involved. The next major opportunity is when the
18 draft EIS is released --oh and let me reiterate, the
19 dates for public scoping extends through July 5th of
20 this year.

21 So you have until July 5th to provide this
22 input to the scoping process. Then the next major
23 opportunity for involvement is when the draft EIS is
24 released and that's targeted for February of '07 and at
25 that time you'll have an opportunity to review the

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1 document and provide comments to the MMS. And
2 throughout the life of the project we've developed a []
3 a website, a public information website, that will
4 support your public involvement activities.

5 And the address for it is shown here on
6 this slide and [] and I hope you'll have a chance to go
7 and look at it. We think it's a valuable resource.
8 Provided on that website is background information
9 about MMS, about the Energy Policy Act requirements,
10 about what an EIS is, as well as general information
11 about the renewable resources that are being examined
12 and the potential alternate uses for platforms. So
13 it's examples.

14 If you noticed when you signed in we had a
15 series of white papers on different renewable
16 technologies up at a table. Those were just review
17 copies. These are posted on the website and are
18 available for you to download. In addition the fact
19 sheet that you were handed and copies of these slides
20 are going to be posted on that site. So that's what I
21 mean when I talk about background [] relevant background
22 information. Also, we're going to use this website to
23 post any of the documents related to the EIS. For
24 example, transcripts of the public scoping meetings
25 will be posted at the end of scoping we'll be preparing

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1 a scoping summary report.

2 That will be posted on the website. In
3 the future the draft EIS and then ultimately the final
4 EIS and the record of decision are all going to be
5 posted and distributed in part through this website.
6 So that hopefully will be useful. There's also a
7 comment form available on the site, which I'll talk
8 about in a minute. Information about the project
9 schedule and then there's also an e-mail notification
10 list that you can sign up for and you'll get periodic e-
11 mails that for and you'll get periodic e-mails that
12 provide you with updates on the project.

13 For example, you'll get a e-mail reminding
14 you shortly before the close of the scoping period and
15 then you'll get an e-mail that will tell you when the
16 scoping summary report is available. And if you signed
17 in tonight and gave us an e-mail address on the sign in
18 sheet we'll go ahead and automatically enroll you on
19 that e-mail list, unless you've already been enrolled
20 yourself. Next slide.

21 As Walter said there are three primary
22 ways or three ways to provide comments during the
23 scoping process and one of the first ones is to go onto
24 the website and use the comment form, which I just
25 mentioned. So you should be able to find that and you

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1 can type in your comments. It also allows you to
2 attach documents of supplemental information up to ten
3 megabytes in size and we think that might be a very
4 efficient way for you to submit comments. Another way
5 is to send them to us by mail and we have these comment
6 forms that were handed out.

7 And you can use this [] write your comment
8 down, fold it, and stamp it, and stick it in the mail
9 or you can use the same address that's shown here to
10 mail other materials, supplementals, stuff that is
11 larger and more lengthy than could fit on this small
12 form and those [] those need to be postmarked by July 5th.

13 And then the third way to provide comments is at any
14 of the scoping meetings and you can provide those
15 comments either orally or in writing or both.

16 So for tonight, as I said, you can provide
17 us written comments, you can fill out one of these
18 forms, you can give us other materials, or you can
19 chose to stand up and make a comment orally and we've
20 got a few procedures set up to [] to manage that. First
21 of all, we hope that if you knew you wanted to speak
22 when you came that you indicated as such when you
23 signed in and I will be calling the names of people who
24 signed up to speak in the order that they signed up.
25 If you didn't sign up and you decide later that you do

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1 want to speak we'll certainly give you an opportunity
2 to do so.

3 We don't have such a large crowd, I'm
4 pretty sure we'll have time, after the people that did
5 sign up we'll have time for other people who are
6 compelled to [] to provide a comment and then as we've
7 mentioned your comments are being recorded and
8 transcripts will be available for each of the scoping
9 meetings that are held that capture all of the remarks.

10 Let's see, the actual mechanics, when you
11 want to make an oral comment we're going to ask you to
12 come up to the podium and state your name and if you're
13 affiliated with an organization state the affiliation.

14 Initially we're going to limit comments to three
15 minutes, again, we don't have such a turn out there
16 will probably be time to cycle back and give you
17 additional time to speak. And we want to remind you
18 that we're talking about scoping for the programmatic
19 EIS, we're not talking about individual projects that
20 are under examination in separate independent
21 processes.

22 There are different processes and
23 mechanisms for providing comments on those individual
24 projects. We'd like you to focus your comments today
25 on your concerns and issues about the scope of this

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1 programmatic evaluation. And then if you have your
2 remarks written down, typed up, and you would like to
3 leave those with us that would be very useful as well.

4 That will help us ensure complete capture of your
5 remarks.

6 I'm going to start now with the people
7 that have signed up and these people I have their names
8 written down and their affiliations and I can give them
9 to Lindsey, but for the rest of you who come up and
10 speak later if you could make sure Lindsey captures
11 your name and affiliation correctly that would be
12 useful. So we had [] we had a handful of people that
13 knew they wanted to speak at the outset and the first
14 person who signed up is Sandra Young. Would you like
15 to come up? And if you could state your name and
16 affiliation again.

17 MS. YOUNG: Hi. My name is Sandra Young
18 and I'm the staff attorney for the Alliance to Protect
19 Nantucket Sound and I thank you for the opportunity to
20 comment on the scope of the programmatic environmental
21 impact statement. Okay. Four years ago the Alliance
22 went on record citing the need for statutory
23 authorization, the development of an underlying
24 regulatory program and a programmatic review to
25 evaluate the impacts of offshore energy development.

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1 And the Alliance is pleased to see that MMS is
2 conducting these essential steps to establish a new
3 energy program.

4 We must, however, object strongly to the
5 review of any individual project including Cape Wind
6 prior to the completion of the programmatic EIS and the
7 development of regulations. Any such premature review
8 undermines the value and purpose of the national
9 program and the programmatic EIS. It also
10 significantly obstructs efforts to protect valuable
11 coastal resources and to fully engage with the public
12 is required by law.

13 The data gathered through a programmatic
14 EIS are invaluable to individual project review. Such
15 data are the foundation for baseline project standards
16 and provide MMS with the information it needs to
17 accurately determine how individual projects need to
18 built or sited to best mitigate the cumulative impact
19 of alternative energy development. In short premature
20 project review will be at best inadequate and are
21 certain to undercut MMS' ability to mitigate regional
22 impacts. Furthermore, proceeding with project level
23 reviews before the programmatic EIS is complete
24 deprives the public of a meaningful opportunity to [] to
25 participate.

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1 When public trust resources as immensely
2 important as Nantucket Sound are at stake public
3 participation cannot be handicapped by unreasonably
4 requiring stakeholders to consider a project without
5 knowing what the standards will be that apply. Federal
6 agencies have a duty to look out for the best interests
7 of the environment; to be the counterweight that
8 prevents private interests from exploiting federal
9 resources to the detriment of the public trust. As
10 stewards of the OCS resource MMS must ensure that the
11 programmatic EIS for offshore alternative energy
12 development reflects a scientifically conservative and
13 environmentally protective approach.

14 The programmatic EIS must look broadly at
15 alternatives and impacts, require rigorous studies, and
16 try to resolve public conflict with the aim of
17 achieving the greatest return for the public overall.
18 I refer you to the Alliance's comments on response to
19 the advance notice of proposed rule making submitted on
20 February 22nd, 2006 and encourage you to use the
21 detailed regulatory framework recommended therein as
22 the basis for the PEIS. And I thank you for your time.

23 MS. SMITH: Thank you very much. And if
24 you want to hand in any written comments that's fine.
25 Okay. Yes, if you speak □ by the way if you speak

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1 tonight that doesn't preclude you from also sending in
2 comments by mail or ¶ or through website. You can vote
3 many times, I guess. Dennis Quaranta and I apologize
4 if I mispronounced your last name.

5 MR. QUARANTA: Dennis Quaranta, President
6 of Winergy Power. It is our hope that as we go through
7 this process that we'll look at the studies and
8 everything that's been done in Europe. There's over 20
9 wind farms that have been built over there. Lots of
10 studies that have been over there, but we need to move
11 our country towards energy independence and we hope
12 that as we try to site these offshore wind ¶ wind
13 turbines that will help us move toward that
14 independence so that we're not tied into a very very
15 long regulatory process.

16 We're hoping that we can see different
17 designs and different things that other companies are ¶
18 are looking at. Look at each ¶ each company on a ¶ on a
19 individual basis, see what they have to offer, what
20 they have different than the other companies and take a
21 look at that and hopefully fast track some of these
22 things. The new companies that are coming out and
23 trying to do this ¶ we're really in a pioneering stage.
24 This is something very very different that hasn't been
25 done before.

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1 We really need to look at this, study it,
2 get some of these built out there and at that time look
3 at some of the studies and see if there is really any
4 any kind of environmental impact, but I think we can
5 see from what has been done in Europe that the impacts
6 are very very minimal and the benefits far out weigh
7 any kind of impact that there have been. So it is our
8 hope that as we look at this that we can take this
9 process and do some fast track
10 fast tracking on it
11 and get these wind farms in built in a reasonable
12 amount of time.

13 Just on the
14 on the siting and the
15 studies and everything that'd have to get done if we
16 were to begin this process now it would be two or three
17 or four years before we could actually start building
18 these wind farms. So we don't really want to delay
19 that process and be two or three years down the road
20 and be seven or eight or nine or ten years out before
21 the first ones can be built.

22 MS. SMITH: Thank you. Now the next
23 individual who signed up is Carolyn Elefant.

24 MS. ELEFANT: Good evening. My name is
25 Carolyn Elefant. I'm an attorney in Washington D.C.
and I'm also the CEO of the Ocean Renewable Energy
Coalition or OREC. OREC is a 501C3 trade association,

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1 which is dedicated to the advancement of the commercial
2 and commercialization of all types of offshore
3 renewables we support [] we're technology neutral and we
4 support offshore wind, offshore wave, hydrogen
5 projects, any types of renewable projects that can wean
6 us from our dependence from foreign oil. Tonight we're
7 here to comment on this EIS scoping process and as we
8 heard in the comments before one of the issues to be
9 addressed in the scoping process are alternatives.

10 We have to examine what our alternatives
11 are, especially our alternatives to no action. And we
12 will begin by addressing some of the implications of
13 taking no action. We think that a process that ends in
14 an onerous regulatory scheme or a scheme that involves
15 duplication of efforts or an extensive regulatory
16 process is not an acceptable alternative. These
17 alternatives are not acceptable, because they will kill
18 nascent [] the nascent offshore renewable energy
19 industry, which carries with it the opportunities to
20 free us from dependence on foreign oil and also from
21 opportunities to create a robust economy based on
22 offshore technology.

23 Now some of the alternatives that MMS
24 should be examining, first I'll discuss the scope of
25 the EIS. We believe that the scope of this EIS should

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1 cover all potential technologies, not just focus on
2 specific near term technologies like offshore wind, but
3 look ahead to the possibilities for offshore wave and
4 also tidal. Right now in Europe there are significant
5 advancements that have been [] that are being made on
6 the offshore wave and tidal scene and part of that is
7 because of government support.

8 Other countries such as Portugal is right
9 now [] the Portuguese utility has a contract for the
10 world's first commercial wave energy project, which
11 would utilize the Palamis technology. If we focus too
12 much on just near term technologies we will obscure and
13 possibly forgo the opportunity for developing other
14 parts of the [] other types of offshore technologies.
15 Other measures that we should exam [] other aspects of a
16 programmatic [] a program of development for offshore
17 renewables, first and foremost we support a streamline
18 process for permitting projects.

19 We support a streamline process for
20 commercial technologies and we believe that a
21 programmatic approach will yield that result, because
22 when you look at the impact from a programmatic
23 approach it gives developers an opportunity to do site
24 specific assessments later on and so we believe that
25 the programmatic approach will help to promote a

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1 streamline process. At the same time there are many
2 new demonstration technologies that are ready to go now
3 and we cannot have those projects stymied either by
4 waiting for a programmatic approach to go through or by
5 the implementation of regulations, which are so
6 onerous that small developers can't [] cannot comply
7 with them.

8 I heard a statistic actually just recently
9 that for some of these offshore projects the project
10 itself might cost \$5 million to develop a prototype and
11 then developers are spending \$2 million on regulation
12 and permitting. That's too large a proportion to be
13 spent on regulatory [] on the regulatory process and
14 it's something that will stymie development and deter
15 investment.

16 Other measures that OREC supports to
17 develop offshore technology, we would ask MMS to look
18 at some of the economic impacts as part of its
19 environmental impact statement as it's required to do
20 by NEPA and some of the economic impacts that should be
21 examined are the impact of exorbitant lease fees. We
22 support lease fees [] that [] we support reasonable lease
23 fees based on [] on production will grace periods for
24 demonstration and pre-commercial projects. We also
25 want lease fees set in such a way so that they maximize

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1 the benefits of production tax credits and other
2 governmental credits that are being given to stimulate
3 this renewable industry. In other words we don't

4 want one arm of the government to detract from
5 benefits that are provided to this industry by another
6 arm of the government.

7 We do support a systematic approach for
8 mapping these resources, not just for wind, but for
9 offshore wave and for title and we hope that there is
10 something that MMS can do as part of this process to
11 free funds from Congress to get offshore and up to date
12 mapping of wave energy and title energy resources
13 underway. We ask MMS to avoid taking any measures that
14 would stifle emerging technologies. I made this remark
15 already, but I feel that it's important to emphasis it,
16 not to just focus on what's in the near term, because
17 there are many other technologies besides offshore wind
18 that are in the near term and if we focus too much on
19 one we really forgo the opportunity for developing
20 others.

21 It's best for us to diversify our
22 portfolio and to try to develop as many resources as
23 possible and to develop resources that are adaptable or
24 that comport to the environmental characteristics of a
25 specific area. We also ask that MMS try to resolve any

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1 jurisdictional conflicts that either exist with other
2 federal agencies or state agencies and come up with
3 ways to cooperate with those agencies and also as these
4 regulations are moving forward we do understand that
5 MMS wants to get this right. We want as [] as a trade
6 association for this industry we want to see this
7 program [] this industry [] this agency get the process
8 right also.

9 We think that Europe has gotten the
10 process right, which is why they have had the progress
11 that they have. But at the same time as we move
12 forward we have to have some procedure in place for
13 interim mechanisms for projects that are ready to
14 deploy now. Right now there are small prototypes that
15 are ready to move forward. They have investors behind
16 them, but investors do not want to wait four or five
17 years to invest in a prototype that may not come to
18 commercial fruition for another 10 to 15 years. So
19 it's very important to address those demo projects and
20 either [] and [] and put together some sort of system for
21 getting those projects permitted [] permitted and
22 studied. And finally we also ask MMS to look at some
23 of the alternatives it talked about with respect to its
24 jurisdiction over existing platforms.

25 We support either a platforms to powers

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1 program or rigs to renewables program or rigs to
2 renewables program where those existing resources can
3 be converted into viable renewable resources and we'd
4 ask MMS to use whatever jurisdiction it has to make
5 sure that that happens. We think that there are really
6 so many opportunities that we have with this program
7 and we look to MMS and we're [] we're very gratified
8 that MMS is trying to take advantage of this
9 opportunity that it has to start from a clean slate and
10 develop this industry and OREC looks forward to working
11 with MMS and to providing whatever support is needed to
12 make sure that we can succeed. Thank you.

13 MS. SMITH: Thank you. The next
14 individual signed up to speak is Michael Fry.

15 MR. FRY: My name is Michael Fry, I'm an
16 avian biologist with the American Bird Conservancy in
17 Washington D.C. . I'm primarily an avian toxicologist.
18 I'm very pleased that MMS has been authorized to manage
19 and regulate offshore renewable energy and especially
20 in light of the good track record MMS has had in
21 maintaining regulation of offshore oil and gas. MMS
22 has developed an excellent OCS environmental studies
23 program and this should carry out [] carry over to their
24 environmental [] they're alternative energy.

25 MMS also has great expertise in dealing

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1 with large offshore structures, which would be an
2 important aspect of insuring stability of the projects
3 offshore. As these renewable energy and alternative
4 energy projects go forward I would like to make sure
5 that MMS ensures that adequate environmental
6 assessments are performed to protect birds, fisheries,
7 benthic resources, marine mammals, and turtles. Studies
8 that must be conducted prior to construction of
9 projects and then it's very important to assess and
10 monitor adverse effects after construction. We've
11 heard a great deal about EMF effects, electromotive
12 effects.

13 We don't know what those effects are [I
14 think there are some conflicts between offshore uses
15 that need to be resolved so with MMS sand and gravel
16 program as well as utilizing offshore shoals there.
17 There are certainly conflicts with fisheries, although,
18 there's a very great potential for having some of these
19 offshore wind farms even function as fish refuge in
20 areas where there has been offshore over fishing.

21 I want to ensure [have MMS ensure that
22 they provide a mechanism for adequate mitigation of
23 impacts of offshore energy projects, including visual
24 impacts which could be mitigated onshore in a variety
25 of different ways, but then certainly wildlife and

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1 fisheries impacts fisheries impacts need to be
2 mitigated in some fashion to ensure that the offshore
3 energy is truly green energy and there's going to be a
4 great deal of concern, I believe, especially in the
5 northeast with the protection of marine mammal,
6 especially white whales. Thank you very much.

7 MS. SMITH: Thank you. The last person
8 signed up to speak is Sashe Annete.

9 MS. ANNETE: Good evening. I'm Sashe
10 Annete. I am an environmental media strategist. I
11 also have a production company that is focusing at the
12 moment on producing events to raise awareness for these
13 very important issues. I would like to thank all of
14 you for this opportunity tonight and particularly Dr.
15 Thresher for your very impassioned presentation. I
16 agree with you. We do not have a choice and what I
17 think people need to realize is that this is not about
18 policy and regulation, with all due respect to those
19 very important parts of this process.

20 This is about one people on one planet and
21 I think that all involved parties need to make a
22 commitment to each other that we might need to think
23 about other ways of getting things done, because we do
24 not have time. We are already way, way behind the
25 clock. I think that I speak for a lot of us in this

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1 profession and in this industry and when I say that I'm
2 I'm not willing to accept the lag in time and issues,
3 you know, like aesthetic impact, taking up too much of
4 of this process, so I I am very hopeful that we can
5 find a new way to to move this through. Thank you.

6 MS. SMITH: Thank you. Well that gets us
7 through the the list of people who signed up when
8 they registered that they wanted to provide a comment
9 and so now we're going to open the floor if there's
10 anybody else who would like to comment we have a person
11 at the back. We'll give everybody an opportunity.

12 MR. LINK: Good evening and thank you for
13 for allowing me to address you. I want I want to make
14 an apology first; I apologize that you and I are
15 wearing a similar colored shirt. I apologize that have
16 almost the same outfit on as Terry back there.

17 MS. SMITH: Can can you provide your
18 name and

19 MR. LINK: Yes.

20 MS. SMITH: Affiliation?

21 MR. LINK: Oh. After I said that now I
22 have to do that, right.

23 MS. SMITH: Yes. Now you do.

24 MR. LINK: My name is Bob Link from a
25 company called Winergy Power, LLC. I'm the permit

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1 compliance officer. Again, thank you very much. In
2 the writing and the setting up of the scope that [] that
3 you're about to undertake I would like one or two
4 things possibly to be considered. Number one, if you
5 follow the European model all of their projects, even
6 Horns Rev, even Knifesbed, Middlegrunden (phonetic),
7 Blithe, even 80 turbines, they're all still
8 demonstration projects. They are not considered
9 commercial projects until they get to the second set of
10 Knifesbed and the second set of Horns Rev. When you're
11 setting this up make a provision within your scope for
12 demonstration or pilot projects. I think that would be
13 very good. Your sign over there says Minerals
14 Management, Minerals Revenue and Stewardship.

15 Stewardshp means you are to protect all
16 sorts of various assets. Those assets could be birds,
17 fish, marine mammals. Put something into your scope
18 that addresses the societal benefits, because the other
19 asset is us poor people and we're not addressed in [] in
20 a typical scope. So if you could do [] put those two
21 things into that scope I think that would make for a
22 far better document. Thank you very much. Have a
23 great day.

24 MS. SMITH: Thank you. Would anybody else
25 like to come up and make remarks, provide comments,

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1 critique our attire? Well we [this is where I kill
2 time while somebody works up a question or comment, we
3 will be here after we break from this formal session

4 and folks from MMS will be available for some
5 additional discussions. I would suggest unless anybody
6 else wants to stand up and make a formal comment that
7 we probably ought to adjourn from this portion of the
8 session. Does that work for you Walter? Going once,
9 going twice. I guess we're [we're done then with the
10 formal comment process.

11 MR. CRUICKSHANK: I [I want to thank all
12 of you for coming out and participating. We do value
13 your input and if you didn't speak today or did and
14 have some additional thoughts please take advantage of
15 the other opportunities to get your thoughts into us on
16 [on scoping this programmatic EIS. I thank you all
17 for coming and as Karen said some of us will be
18 sticking around a little while if there's [there's
19 more things you want to talk about.

20 (Whereupon, the foregoing matter went off
21 the record at 8:01 p.m.)
22
23
24

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